

## **From Belief Revision to Belief Manipulation – Exploratory Thoughts (Abstract)**

Abhaya Nayak

Department of Computing, Macquarie University, Sydney, Australia  
`abhaya.nayak@mq.edu.au`

### **Abstract**

Belief Dynamics as a field of research is quite mature, with a history of over thirty years. At a very high level, it is akin to science in spirit: to build theories that can be employed to make predictions. Given the belief state of an agent, and some new information that it has accepted (or rejected), Belief Dynamics aims to predict the new belief state of the agent. There is an interesting converse of this problem that has drawn little attention from the community, that we call Belief Manipulation. Given that we know the current state of an agent's knowledge, and some proposition that we want them to believe (or suspend their judgment on), how can we bring about that epistemic change in that agent. In this, the problem of belief manipulation has the flavour of engineering rather than of science. Belief manipulation is not as rare a phenomenon as one would like it to be. Political propaganda, fake news, information warfare, various sorts of scams and market manipulation are all instances of belief manipulation. A good understanding of this process can help us to potentially detect attempts at belief manipulation and take pre-emptive measures. In this talk I will present some preliminary ideas on the logic of belief manipulation.